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10/731,077	12/09/2003	Volker Kuhnel	36321	3740
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PAUL, DISLER				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/731,077

**Applicant(s)**

KUHNEL, VOLKER

**Examiner**

DISLER PAUL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-16, 19-22, 25-27 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-13, 19, 28-30, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 10, 12, 13, 17, 18, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/24/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

In response to the Applicant's Amended claim of wherein Beck et al. fail to disclose of the "analyzing the electrical signal in the first hearing device and adjusting the first hearing device based on the result" . Note, Beck et al. also disclose of such feature wherein the "analyzing the electrical signal in the first hearing device and adjusting the first hearing device based on the result"(par[0057]/fig.1 wt (5',6") such analyzing of signal is done").

### ***Claim Objections***

1. Claims 10,12-13,17-18,23-24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend on a multiple dependent claim (e.g., claim16 is a multiple dependent claim). See MPEP § 608.01(n). Accordingly, the claims 10,12-13,17-18,23-24 not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

2. Claim 32 recites the limitation "said control unit and another coupler" in claim. There is insufficient antecedent basis for this limitation in the claim.

For prior art rejection, claim 32 will be read as: a test speaker separate from said first and second hearing device and is connected to a control unit of the first hearing device for generating additional acoustic test signal for input into the

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microphone of the first hearing aid and a coupler for acoustically coupling said speaker for generating said acoustic test signal of said first hearing aid with said second microphone of the second hearing device and wherein said acoustic test signal is generated by said first hearing device based on additional acoustic test signal.

3. Claim 33 recites the limitation "said control unit and said first microphone "in claim. There is insufficient antecedent basis for this limitation in the claim.

For prior art rejection, claim 33 will be read as: the system of claim 1, wherein said speaker for generating said acoustic test signal is electrically connected to a control unit of said first hearing device, and is separate from said first hearing device and said second hearing device, and wherein a microphone of the first hearing device also receive said acoustic test.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3,7-9,28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable Beck et al. (US 2004/0057591 A1") and Kachler et al. (US 2002/0082794 A1).

Re claim 1, Beck et al. discloses a method for adjusting a first hearing device based on adjustments of a second hearing device ("page 2[0019] line 19-23 & page 2[0028] line 6-10-adjustment made based on received adjustment of second device"), the method comprising the steps of: converting an acoustic test signal into an electric test signal by a microphone of the second hearing device ("fig.1/#2;page 5[0052] line 5"); analyzing the electrical signal in the first hearing aid ("fig.1/#5;fig.2/#17;page 5[0053]line 5-8; par[0057]/fig.1 wt (5',6')"); and adjusting the first hearing device based on results obtained in the analyzing performed in the first hearing aid ("fig.1-2;page 2[0019] line 19-23 & page 2[0028] line 6-10; page 5[0057] line 7-8; fig.1/adjustment based on analyzing unit #5 via transmitter#10 to hearing device 1"). .

While, Beck et al. disclose of the above with including the transmitting signal between the first and second hearing aid device (page 2[0017] line 9-13; fig.1/#8; page 5[0057] line 7-8)), But, Beck et al. fail to disclose of the specific converting the acoustic signal generated by a receiver of the second hearing device into an electrical signal. But, Kachler et al. disclose a system wherein the similar concept of converting the acoustic signal generated by a receiver of the second hearing device into an electrical signal

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(fig.2-3 wt (5,3,4); page 3[0026] line 14-22) for the purpose of checking the serviceability of the hearing aid. Thus, taking the combined teaching of Beck et al. and Kachler et al. as a whole, it would have been obvious for one of the ordinary skill in the art at the time of the invention to have incorporate the similar concept of converting the acoustic signal generated by a receiver of the second hearing device into an electrical signal for the purpose of checking the serviceability of the hearing aid.

Re claim 3, the method of claim 1, wherein the acoustic test signal is generated in the first hearing device ("fig.1/2; page 3[0034] line 11-14'-input transducer mean to pick up test signal").

Re claim 7, the method of claim 1, wherein the step of analyzing the electrical signal takes place in a control unit provided inside the first hearing device ("fig.1/#5'- analyzing in control unit inside the first hearing device").

Re claim 8, have been analyzed and rejected with respect to claim 7 respectively.

Re claim 9, the method of one of claims 1 to 8, further comprising the step of simultaneously feeding the acoustic test signal to a microphone of the first hearing device for its calibration ("page 4[0048] line 4-8; page 5[0049] line 16-20-calibration may be acquired in hearing band").

Re claim 28, the method of claim 1, wherein said adjusting step is for the purpose of configuring settings of said first hearing device to closely match settings already present in said second hearing device (page 2[0019] line 18-23; [0021] line 12-16)/ second hearing aid had adapting mechanism (adjuster) for matching time/amplitude to first hearing aid).

Re claim 29, Beck et al. disclose of the method for adjusting a first hearing device based on adjustments of a second hearing device (fig.1; page 2[0017] line 16-23/ have signal time and amplitude match the first hearing aid), the method comprising the steps of: converting a first acoustic test signal into an electric test signal by a microphone of the second hearing device (page 2[0019] line 1-6; fig.1(2)); having transmitting a second generated signal by a receiver of the second hearing device, wherein said second is based on settings previously applied to said hearing device (page 2[0017] line 13-17/second measure signal path of is transmitted; fig.1 (8), with

signal of previous measured setting); analyzing the electrical signal in an analyzing unit comprise in said first hearing device to determine the appropriate settings for said first hearing device for closely matching said previously applied settings of said second hearing device and adjusting said first hearing device based on the results obtained in the analysis performed in the analyzing unit such that settings of said first hearing device are adjusted to closely match the previously applied settings of said second hearing device (fig.1-2; page 2[0019,0057] line 17-23; page 2[0021] line 12-19/adapting mechanism for adjusting the second hearing aid to second based on time and amplitude).

While, beck et al. disclose of the above, He fail to disclose of the second signal being an acoustic signal generated to the second hearing aid into electrical signal. But, Kachler et al. disclose a system wherein the similar concept of converting the acoustic signal generated by a receiver of the second hearing device into an electrical signal (fig.2-3 wt (5,3,4); page 3[0026] line 14-22) for the purpose of checking the serviceability of the hearing aid. Thus, taking the combined teaching of Beck et al. and Kachler et al. as a whole, it would have been obvious for one of the ordinary skill in the art at the time of the invention to have incorporate the similar concept of converting the acoustic signal generated by a



receiver of the second hearing device into an electrical signal for the purpose of checking the serviceability of the hearing aid.

Re claim 30, the method of claim 29, wherein said analyzing determining a transfer function of said second hearing aid based on said previously applied setting, and wherein said setting of said first hearing aid device are adjusted based on said transfer function (par[0017,0056-0057]/based on transfer time function of second hearing aid from mics to speaker then, the first is accordingly adjusted.)

3. Claims 2,4-6, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck et al. ("US 2004/0057591 A1") and Kachler et al. (US 2002/0082794 A1) and further in view of Gabara et al. ("US 7,024,000 B1").

Re claim 2, Beck et al. and Kachler et al. as a whole, further disclose wherein the acoustic test signal is generated in a control unit ("fig.1/#5;5'"). However, they fail to disclose the limitation of having the control unit being provided outside the hearing devices.

Gabara et al. discloses of a system in readjusting the performance characteristic of the hearing aid in which the control unit being provided outside the hearing devices ("fig.1-2/#10,13") for

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the purpose of remotely performing diagnostic of the hearing aid device.

Therefore, taking the combine teaching of Beck et al. and Kachler and Gabara et al. as a whole, one skill in the art would have found it obvious to modify Beck et al. to incorporate the control unit being provided outside the hearing devices for the purpose of remotely performing diagnostic of the hearing aid device.

Re claim 4, the method of claim 1, wherein the step of analyzing the electrical signal takes place in a control unit provided outside the hearing devices (see claim 2 rejection above).

Re claim 5-6, have been analyzed and rejected with respect to claim 4 respectively.

Re claim 11, the method of one of the claims 1, wherein an acoustic test signal is used ("page 3[0034 line 11-14;page 5[0049] line 1-3") being an unmodulated noise ("page 5[0053] travel car-in most cases make unmodulated, not toned down noise"). However, Beck et al. does not disclose the limitation of the noise being with a level step of preferably 25 dB. However, official notice is taken such

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limitation of noise level of 25db is commonly known in the art as an acceptable level of noise. Thus it would have been obvious for one of ordinary skill in the art to have the noise being at a 25 dB range or level in order to fall within the acceptable range.

Claims 1,3,7-9,28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable Beck et al. (US 2004/0057591 A1) and Kachler et al. (US 2002/0082794 A1) and further in view of Ishige et al. (US 5,910,997).

Re claim 32, the system of claim 1, wherein said speaker for generating said acoustic test signal is included in said first hearing device, However, the combined teaching of Beck et al. and Kachler et al. as a whole, fail to disclose of wherein said system further comprises: a test speaker separate from said first and second hearing device and is connected to a control unit of the first hearing device for generating additional acoustic test signal for input into the microphone of the first hearing aid and a coupler for acoustically coupling said speaker for generating said acoustic test signal of said first hearing aid with said second microphone of the second hearing device and wherein said acoustic test signal is generated by said first hearing device based on additional acoustic test signal.

But, Ishige et al. disclose of a fitting system wherein a test speaker separate from said first and second hearing device and is connected to a control unit of the first hearing device for generating additional acoustic test signal for

input into the microphone of the first hearing aid and a coupler for acoustically coupling said speaker for generating said acoustic test signal of said first hearing aid with said second microphone of the second hearing device and wherein said acoustic test signal is generated by said first hearing device based on additional acoustic test signal (fig.12 wt (96,10); fig.3 (11,10,13); loudspeaker attached to hearing device for generating testing ) for purpose of improving the hearing device characteristic based on the user. Thus, taking the combined teaching of Beck et al. and Kachler et al. and Ishige et al. as a whole, It would have been obvious for one of the ordinary skill in the art at the time of the invention to have modify , the combined teaching of Beck et al. and Kachler et al. as a whole, with the test speaker separate from said first and second hearing device and is connected to a control unit of the first hearing device for generating additional acoustic test signal for input into the microphone of the first hearing aid and a coupler for acoustically coupling said speaker for generating said acoustic test signal of said first hearing aid with said second microphone of the second hearing device and wherein said acoustic test signal is generated by said first hearing device based on additional acoustic test signal for purpose of improving the hearing device characteristic based on the user.

Re claim 33, the system of claim 1, However, the combined teaching of Beck et al. and Kachler et al. as a whole, fail to disclose wherein said speaker for generating said acoustic test signal is electrically connected to a control unit of said first hearing device, and is separate from said first hearing device and said second hearing device, and wherein a microphone of the first hearing device also receive said acoustic test.

But, Ishige et al. disclose of a fitting system, wherein said speaker for generating said acoustic test signal is electrically connected to a control unit of said first hearing device, and is separate from said first hearing device and said second hearing device, and wherein a microphone of the first hearing device also receive said acoustic test (fig.3 (11,10,13); fig.12 wt (96,10)) for purpose of improving the hearing device characteristic based on the user. Thus, taking the combined teaching of Beck et al. and Kachler et al. and Ishige et al. as a whole, It would have been obvious for one of the ordinary skill in the art at the time of the invention to have modify , the combined teaching of Beck et al. and Kachler et al. as a whole, with speaker for generating said acoustic test signal is electrically connected to a control unit of said first hearing device, and is separate from said first hearing device and said second hearing device, and wherein a microphone of the first hearing device also receive said acoustic test for purpose of improving the hearing device characteristic based on the user.

***Allowable Subject Matter***

2. Claims 14-16,19-21-22,25-27,31 are allowed.

Re claim 14, Beck et al. discloses an apparatus comprising a first hearing device and a second hearing device; a loudspeaker generating a acoustic test signal; a control unit operationally connected to the loudspeaker; whereas the acoustic test signal is fed to a microphone of the second hearing device; the first hearing device which is operatively connected to the control.

However, none of the prior art of record disclose of the couple element including a measurement microphone and the acoustic test signal is fed to a microphone of the second hearing device in which another acoustic signal is generated that is recorded by the measurement microphone of the couple element, The measurement microphone being operatively connected to the first hearing device which is operatively connected to the control unit.

Similarly, Re claims 20,31 have been analyzed and allowed in view of claim 14 above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. P./  
Examiner, Art Unit 2615

/Vivian Chin/  
Supervisory Patent Examiner, Art Unit 2615